### BEFORE THE DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION OF THE STATE OF MONTANA

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APPLICATION TO CHANGE WATER RIGHT )
NO. 40A 30154581 BY BART AND HEATHER )
BILDEN

# PRELIMINARY DETERMINATION TO GRANT CHANGE

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On January 31 2022, Bart and Heather Bilden (Applicants) submitted Application to Change Water Right No. 40A 30154581 to change Water Right Statement of Claim Nos. 40A 110250-00 and 40A 30107008 to the Lewistown Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). The Department published receipt of the application on its website. The DNRC sent applicant a deficiency letter under §85-2-302, Montana Code Annotated (MCA), dated June 22, 2022. The applicant responded with information dated August 11, 2022. The application was determined to be correct and complete as of November 21, 2022.

The Department met with the applicants (Bart and Heather Bilden) on December 5, 2022. In this meeting, the Applicant clarified why the 417 GPM flow rate was needed and why retiring acreage was necessary to achieve that flow rate on the remaining acreage. This clarification also explained the need for the amendment to application received April 4, 2022. An Environmental Assessment for this Application was completed on November 18, 2022.

#### **INFORMATION**

The Department considered the following information submitted by the applicant, which is contained in the administrative record.

#### Application as filed:

- Application to Change Water Right, Form 606 IR
- Application Details attachment
- Sage Grouse letter to Bart and Heather Bilden dated December 28th, 2021.
- Copy of letter to Lavina North Canal water users dated December 10, 2021
- Maps: Annotated aerial photo maps of the historical conveyance, place of use, and proposed point of diversion.

### Information Received after Application Filed

Amendment to Application received April 4, 2022.

- Deficiency Letter dated June 22, 2022.
- Applicant response to deficiency letter dated August 11, 2022.
  - A deficiency letter was sent out to the applicant stating that a timeline will need to be established for the completion of the project. Applicants initially indicated a time of 'zero years' on the first application. That timeline was considered a deficiency by DNRC and a letter was sent to the applicants dated 06/22/2022. In the return application the applicants indicated a timeline of 3 years. This was accepted by DNRC and the countdown for 3 years will begin on the day the change in water rights is authorized by DNRC.
  - The application did not include pump make, model, and power curve chart which is required by DNRC to future proceed with the application.
  - The copy of application was signed by Dan Bilden.
- Water right 40A 110250-00 had a flow rate of 0.62 CFS which was not enough to supply their new wheel line system as designed. The amendment to the application received April 4, 2022, (after the application was received) added water right 40A 30107008, which has a maximum flow rate of 1.75 CFS. The amendment explained why these two water rights need to be combined to supply an adequate flow rate for the system as designed. The pump is designed to pump 417 GPM (0.929 CFS) of water from the Musselshell River.
- Notes taken by Heather Bilden on NRCS design for wheel line. Details on nozzles, flow rates, etc. Received by DNRC 1/31/2023.

### <u>Information within the Department's Possession/Knowledge</u>

- DNRC Deficiency Letter, dated June 22, 2022.
- Statement of Claim 40A 110251-00 initially had multiple owners with a divided interest.
   The applicants requested that the water right be split in two owners, Brock and Carolyn Bilden and Bart & Heather Bilden (OUID 144732).
- Split Claim 40A 30107008 was created from Parent Claim 40A 110251-00 and was granted by the Water Court on November 10th, 2016.
- As per Water Court orders, Brock and Carolyn Bilden own water right 40A 110251-00 and Bart and Healther Bilden own water right 40A 30107008.

- According to the General Abstract from the State of Montana, water rights 40A 110251-00 and 40A 30107008 share a Maximum Flow Rate of 1.75 CFS and water rights will be operated "as agreed upon by the parties."
- Remarks were added by DNRC that the maximum flow rate will not exceed 1.75 CFS
  regardless of the number of parties that the water right was split into. The parties are
  expected to come upon an independent agreement on the division of use for water
  resources without exceed the maximum allowed flow rate.
- Ryegate precipitation and evaporation data.
- Penman/Linacre Method evaporation data for Ryegate.
- DNRC surface water right records.
- Golden Valley County Water Resources Survey maps and narratives, including ditch dimensions form Lavina North Canal.
- Montana Cadastral parcel and property information.
- Musselshell River surface water rights information.
- Water Right claim files for water right numbers 40A 110250-00, 40A 110251-00 and 40A 30107008.
- DNRC Environmental Assessment dated 11/18/2022.
- Change in Irrigation Water Technical Report, dated 11/21/2022
- The Department also routinely considers the following information. The following
  information is not included in the administrative file for this Application, but is available
  upon request. Please contact the Lewistown Regional Office at 406-538-7459 to request
  copies of the following documents.
  - DNRC Return Flow Policy Memo, dated April 1, 2016
  - DNRC Consumptive Use and Irrecoverable Loss Methodology Memo, dated April 15, 2013.
  - DNRC Historic Diverted Volume Standard Methods Memo, dated September 13, 2012.

The Department has fully reviewed and considered the evidence and argument submitted in this Application and preliminarily determines the following pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, part 4, MCA).

### **WATER RIGHTS TO BE CHANGED**

### FINDINGS OF FACT

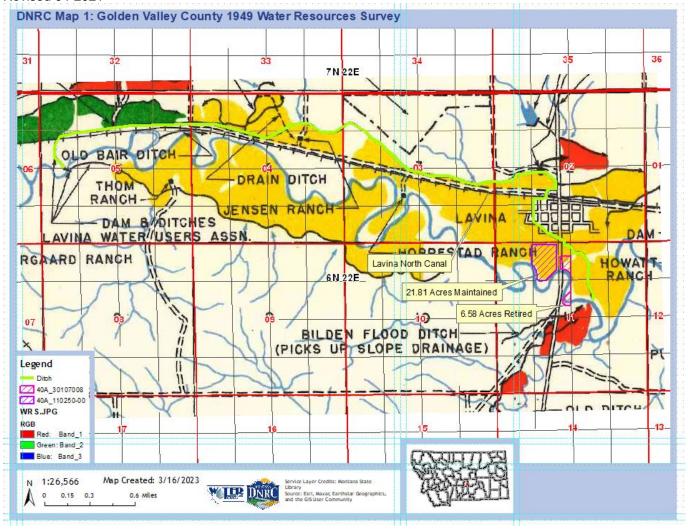
- 1. Water Right Claim No. 40A 110250-00 for 278 GPM, has historically diverted from the Musselshell River in Golden Valley county for the purpose of flood irrigation with a priority date of May 1, 1890. The period of use and the period of diversion are both listed from April 1 to October 31.
- 2. The place of use of water right claim no. 40A 110250-00 covers 24.90 acres in the NW of Section 11, T6N R22E. The point of diversion is in the NENWSW of Section 5, T6N R22E and involves the Lavina North Canal. The place of use is immedately south of the town of Lavina. This water right was included in the Preliminary Decree issued for Basin 40A on June 7, 2017.
- 3. Water Right Claim No. 40A 30107008 for 1.75 CFS historically diverted from Musselshell River, tributary to the Missouri River, in Golden Valley County for the purpose of flood irrigation with a priority date of May 1, 1890. The period of use is April 1 to October 31 and the period of diversion is the same. The place of use is 10 acres in the NW of Section 11, 6N 22E. The point of diversion is in the NENWSW of Section 5, 6N 22E and involves the Lavina North Canal. The place of use is immedately south of the town of Lavina. This water right was included in the Preliminary Decree issued for Basin 40A on June 7, 2017. This water right was split from parent claim 40A 110251-00 on November 10, 2016 to create the version listed in Table 1.

### **Table 1: WATER RIGHTS PROPOSED FOR CHANGE**

W.R. NO.	FLOW	VOLUME	PURPOSE	PERIOD OF USE	PLACE OF USE	POINT(S) OF DIVERSION	PRIORITY DATE	
40A	278	-	FLOOD	APRIL 1	24.90	NENWSW of	May 1,	
110250-00	GPM		IRRIGATION	- OCT	acres in	Section 5, 6N	1890	
				31	the NW of	22E and		
					Section	involves the		
					11, 6N	Lavina North		
					22E	Canal		
40A	1.75	35.80	FLOOD	APRIL 1	10 acres	NENWSW of	May 1,	
30107008	CFS	AC-FT	IRRIGATION	- OCT	in the NW	Section 5, 6N	1890	
				31	of Section	22E and		
					11, 6N	involves the		
					22E	Lavina North		
						Canal		

- 4. There are no previous change authorizations on the rights to be changed. There are no water rights supplemental to the place of use of either of the rights to be changed.
- 5. The water rights being changed in this application are located in the Upper Musselshell Basin (Basin 40A) which is not subject to any administrative water right basin closures.

Revised 04-2021



#### CHANGE PROPOSAL

### FINDINGS OF FACT

6. Applicant is proposing to change the point of diversion for Statement of Claim numbers 40A 110250-00 and 40A 30107008. They propose to move from a headgate supplying water through the Lavina North Canal in the NENWSW Section 5 T6N R22E to a pumpsite on the Musselshell River located in the NWSENW Section 11 T6N R22E. They also propose to retire the acreage associated with claim 40A 30107008 (10 acres on abstracts, 6.68 ac according to department historical analysis) in order to supplement the flow rate of claim 40A 110250-00. The applicant proposes to irrigate the remaining field using wheel line irrigation instead of flood irrigation. After this change a total of 21.43 acres in the NW of Section 11, T6N R22E will be entirely supplementally irrigated by claims 40A 30107008 and 40A 110250-00. The applicant

proposes to divert water from the Musselshell River at the proposed pumpsite at a maximum flow rate of 417 GPM. It was calculated that changing the headgate will elimate the use of the ditch which will result in conservation of water. The conveyance losses were calculated to be 1117.55 AC-FT per year, and changing the point of diversion and means of conveyance will result in elimating that convyence loss.

- 7. The only change to the place of use is that the acreage associated with Statement of Claim no. 40A 30107008 will be retired. The total acreage retired is 6.58. The flow rate of claim 40A 30107008 is to supplement the flow rate of 40A 110250-00 for a total of 417 GPM which is the rate required for their wheel line system as designed. There will be no change in purpose or in the pattern of use. The period of use will continue to be the same as it was originally listed on the water right, from April 1st to October 31st. The historic place of use associated with water right 40A 110250-00 will continue to be irrigated in it's entirety.
- 8. This authorization as granted will be subject to the following measurement condition:

The Appropriator shall install a measuring device in the conveyance facility as near as practical to the pump site, in order to measure appropriations. The type and location of the device must be approved by the Department. The Appropriator shall keep a written record of the flow rate and volume of water diverted, including the period of time of diversion. Records must account separately for any appropriations under this authorization from appropriations under any other water right using the same diversion works and conveyance facility. Records shall be submitted by December 31 of each year and upon request at other times during the year. Failure to submit reports as required by these conditions may be cause for revocation of the change. The records must be sent to the Lewistown Water Resources Regional Office. The Appropriator shall maintain the measuring/monitoring device so it always operates properly and measures flow rate accurately during periods of appropriation.

- 9. The Applicants have received approval from the Sage Grouse Habitat Conservation Program. The project area falls within the Sage Grouse Habitat Conservation Area.
- 10. This application was deemed Correct and Complete on November 18, 2022, and during a meeting on December 5, 2022, the Applicant explained why the 417 GPM flow rate was needed and why retiring acreage was necessary to achieve that flow rate on the remaining acreage.

### **CHANGE CRITERIA**

- 11. The Department is authorized to approve a change if the applicant meets its burden to prove the applicable § 85-2-402, MCA, criteria by a preponderance of the evidence. Matter of Royston, 249 Mont. 425, 429, 816 P.2d 1054, 1057 (1991); Hohenlohe v. DNRC, 2010 MT 203, ¶¶ 33, 35, and 75, 357 Mont. 438, 240 P.3d 628 (an applicant's burden to prove change criteria by a preponderance of evidence is "more probably than not."); Town of Manhattan v. DNRC, 2012 MT 81, ¶8, 364 Mont. 450, 276 P.3d 920. Under this Preliminary Determination, the relevant change criteria in §85-2-402(2), MCA, are:
  - (2) Except as provided in subsections (4) through (6), (15), (16), and (18) and, if applicable, subject to subsection (17), the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:
  - (a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.
  - (b) The proposed means of diversion, construction, and operation of the appropriation works are adequate, except for: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.
  - (c) The proposed use of water is a beneficial use.
  - (d) The applicant has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use or, if the proposed change involves a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water. This subsection (2)(d) does not apply to: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.
- 12. The evaluation of a proposed change in appropriation does not adjudicate the underlying right(s). The Department's change process only addresses the water right holder's ability to make a different use of that existing right. <u>E.g.</u>, <u>Hohenlohe</u>, at ¶¶ 29-31; <u>Town of Manhattan</u>, at ¶8; *In*

the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation Company (DNRC Final Order 1991).

### **HISTORIC USE AND ADVERSE EFFECT**

### FINDINGS OF FACT - Historic Use

- 13. Historic use has consisted of diversion via headgate from the Musselshell River via 26,139 ft of ditch (Lavina North Canal) to reach the place of use. Irrigation has historically occurred three times per year for fourteen days in a row in early June, early July, and early August. There have been seasons where coordination with other canal users has been problematic and only two irrigations have been possible, and the granting of this change will remedy that by enabling the applicants to elimitate use of the Lavina North Canal.
- 14. No records of historical water use prior to July 1, 1973 water use exist in terms of personal or water commissioner records, crop production records or other documents supporting the amount of water historically diverted or used.
- 15. There are no nonuse issues associated with this application. Applicants claim that this water right has been in use every summer since 2020. The exception was 2021 irrigation season the right was not used due to the application not being filed in time.
- 16. There are no supplemental rights to the existing rights being changed.
- 17. The Lavina North Canal has a calculated capacity of 53.93 CFS using the Manning's equation. The Mannings equation was used because it is an accepted method to calculate uniform flow in open channels.
- 18. The total flow rate for the purpose of this change is (1.75+0.62 CFS) = 2.37 CFS (1063.66 GPM). This is respective to the two water rights in the change: 40A 110250-00 and 40A 30107008. The proposed system requires 417 GPM.
- 19. Conveyance loss is defined as the portion of water diverted at the headgate that does not arrive at the irrigated place of use due to seepage and evapotranspiration from the ditch. In this case, there are multiple water rights using the same diversion and conveyance facilities. The Department broke the main ditch down into 5 segments based on the locations where water rights are taken out of the ditch. The Applicant's flow rate was then divided by flow remaining in the ditch for each segment to determine their percent of flow in each segment. Those percentages

were then applied to the conveyance losses for each segment to determine the Applicants' portion. The calculation spreadsheet for each portion are at the end of this report as Appendix A.

- 20. Conveyance loss of **1175.55** is broken into 3 parts: seepage loss, vegetation loss and ditch evaporation.
- 21. Seepage loss of **920.27** is calculated as (wetted perimeter)(ditch length)(loss rate)(days)/43560 ft²/acre. For the Lavina North Canal, seepage loss is 920.27 AF where the main ditch is 6 feet wide and 3 feet deep, 26,139 ft. long (4.95 miles), the loss rate of 0.6 is based on silty clay soils and 213 is the number of days the Applicants use the ditch (April 1 October 31).
- 22. Vegetation loss of **248.01** is calculated as (% loss per mile)(flow in CFS)(days ditch is flowing)(ditch length in miles)\*2. For the Lavina North Canal, total vegetation loss is 37.48 AF where percent loss per mile is a constant 0.0075, 15.68 CFS flow rate between applicants and upditch water rights, 213 days the Applicants use the ditch, 4.95-mile length and the unit conversion constant 2 is the number of AF/Day/CFS rounded up from 1.98.
- 23. Ditch Evaporation of **7.27** is calculated as (surface area of ditch (length\*width in ft.))(evaporation rate in ft./acre/yr., period adjusted)/43,560 ft²/acre. For the Lavina North Canal, the evaporation is 7.27 AF where the main ditch is 6 ft. wide, 26,139 ft. long, and the period adjusted evaporation from Potts is 2.02 ft. (41.55 inches/year = 3.46 ft. /365\*213 days = 2.02 ft.).
- 24. The Applicants' portion of conveyance losses total **536.01 AF** (See Appendix A). With an applied volume of 57.92 AF, the total historic diverted volume for these rights is **593.93 AF** (536.01 + 57.92 = 593.93).
- 25. The historically consumed volumes for these water rights were quantified pursuant to the methods outlined in ARM 36.12.1902(16). The 62.6% historical management factor for Golden Valley County was applied to the Ryegate weather station evapotranspiration water requirement of 17.46 inches (1.46 feet), and a historical irrecoverable loss percentage of 5% for wild flood irrigation were considered. The Department considered an on-farm efficiency of 45% based on the uneven pattern of shade contrast visible on historical aerial photos. Consumptive use for each water right was determined using the proportion that is based on the calculations in Table 1, that is historic volume based on percent of flow rate.
- 26. The following table reflects the Department's findings of historic use. The historical consumptive use of 26.07 AF was calculated by the Department using the methodology in ARM

36.12.1902. Based on 28.39 acres, an IWR for flood irrigation at the Ryegate weather station in Golden Valley County of 17.60 inches and a county management factor of 62.6%, the consumptive use for these rights is 26.07 AF (28.39 AC x 17.60/12 AF/AC x 0.626 = 26.07). The Department adds 5% of field applied volume to account for irrecoverable losses (IL) in flood irrigation systems. Using a 45% efficiency for flood irrigation using contour ditches, the irrecoverable losses are 2.9 AF ( $26.07/0.45 \times 0.05 = 2.9 \text{ AF}$ ). The total historical consumptive use including irrecoverable losses is 28.97 AF (26.07 + 2.9 = 28.97 AF).

Table 2: DEPARTMENT FINDS THE FOLLOWING HISTORIC USE: WATER RIGHTS PROPOSED FOR CHANGE

WR Claim #	Priority Date	Diverte d Volume	Flow Rate	Purpose (Total Acres)	Consump. Use	Place of Use	Point of Diversion
40A 110250	May 1, 1890	159.36 AF	278.00 gpm (0.62 cfs)	Irrigation 21.81 acres	21.84 AF	NW Sec. 11 T6N R22E	NENWSW Sec. 5 T6N R22E
40A 30107008	May 1, 1890	453.58	1.75 CFS (flow rate subject to split water right agreement rec'd 1/9/2023)	Irrigation 6.58 acres	6.59 AF	NW Sec. 11 T6N R22E	NENWSW Sec. 5 T6N R22E

27. The Department uses the following formula to determine historic diverted volume: Historic Diverted Volume of 1222.95 = (Volume historic consumptive use/On-farm efficiency) + Volume conveyance loss. The historic consumptive use, not including irrecoverable losses is 26.07 AF. Using a flood irrigation efficiency of 45% the field applied volume is 26.07/0.45 = 57.92 AF. Conveyance loss is 1175.55 (FOF 19-26).

The historical diverted and consumed volumes are divided between the two rights based on percent of total flow rate.

Table 1. Historical volume based on percent of flow rate

Water Right No.	Flow Rate (CFS)	Percent of total Flow Rate (2.37 CFS)	Historical Diverted Volume	Historical Consumed Volume (Incl. IL)
40A 110250 00	0.62	26%	154.42	7.53
40A 30107008	1.75	74%	439.51	21.43
Total	2.37	100%	593.93	28.96

#### FINDINGS OF FACT – Adverse Effect

- 28. This change proposes to reduce the historical irrigated acreage (change to place of use) by 6.58 acres and eliminate 26,139 ft of ditch (change to point of diversion). This will reduce consumptive volume by 6.71 ac-ft and diverted volume by 536.01 ac-ft.
- 29. 44.50 AF is the new proposed diverted volume for these water rights (57.92 AF historical field applied volume 13.43 AF retired per 6.58 acres retired). This is the same volume as the historically diverted volume not including retired acreage and volume and not including conveyance losses which will no longer be subject to the loss component of 536.01 AF. The Applicants will install a wheel line on the same footprint as what has been historically irrigated.
- 30. The Applicants have historically irrigated 28.39 acres with 45% efficient flood irrigation using contour ditches. They will install a wheel line system of exact efficiency within the exact historic place of use associated with water right 40A 110250-00. Acreage and volume associated with water right 40A 30107008 will be retired, while the flow rate of 1.75 CFS will be used on the acreage associated with water right 40A 110250-00 subject to an agreement received by DNRC 1/9/2023. The agreement states that the water rights will be operated by dividing the time of use, and that only one water right will be used at a time.
- 31. The Applicants propose to irrigate only the 21.81 acres associated with water right 40A 110250-00.
- 32. The Lavina North Canal will no longer be used by the applicant, which will eliminate conveyance losses calculated at 536.01 AF (applicant portion).
- 33. The proposed diverted volume will be 44.50 AF with no conveyance loss due to proposed pipeline replacing canal.

- 34. DNRC analysis reflects historic consumptive use of 28.96 AF and proposed consumptive use of 22.25 AF. This difference of -6.71 AF is the result of retiring the 6.58 acres associated with water right 40A 30107008.
- 35. Please see Appendixes A and B for summary of aforementioned calculations. These demonstrate that there will be no adverse effect by showing that there will be less consumed volume by 6.71 AF and less diverted volume by 1175.55 AF.
- 36. Because the flow rate of the water rights associated with this change will remain in the source until diverted at the proposed pump site, and because said pump site is at the approximate location of any return flows that would be returned to the source during historical flood irrigation activity, there are no recorded diversions in between the historical diversion and the proposed diversion that could be adversely affected.
- 37. No other water rights will be impacted as a result of this change. This change proposes to reduce both diverted and consumed volume, and the proposed POD is at the same location as any return flows that would have returned to the source. The proposed pump diversion has flowmeter that will enable the Applicants to limit their diversion to the allowed flow rate.
- 38. There may be a change to the historical timing of diversions, but they are to remain within the period of diversion as reflected on water right abstracts and are subject to the shared flow rate agreement.
- 39. There will be a measuring device associated with the new point of diversion.
- 40. As part of its plan to prevent adverse effects, the Applicant will measure appropriations and comply with the District Court enforced water distribution project on the Musselshell River. Accordingly, the Department imposes a water measurement and reporting condition as part of this Preliminary Determination

### **BENEFICIAL USE**

#### FINDINGS OF FACT

41. Applicant proposes to use water for irrigation of 21.81 acres in the NW of Section 11, T6N R22E.using a pump, pipeline and wheel line as the means of diversion, conveyance and irrigation method, respectively. The POU will be the same for both rights being changed (supplementary irrigation).

42. Applicant proposes to use 46.56 AC-FT diverted volume and 417 GPM flow rate. This amount is supported by the Department's historical diverted volume formula as noted on the technical report. Flow rate for the proposed system of 417 GPM is calculated based on 43 nozzles at 9 GPM each, plus 30 GPM to spray diversion screen. The spray to diversion screen cleans river debris off the screen.

### **ADEQUATE DIVERSION**

#### FINDINGS OF FACT

43. Applicants propose to use a trailer-mounted propane-powered Cornell 2.5YH pump with the capacity to pump at the 417 GPM. This is specified in the water rights change application. The proposed diversion includes an 8-inch McCrometer flowmeter which will enable the applicants to monitor both flow rate and volume. The pump supplies water to a pipeline feeding a dual wheel line.

### **POSSESSORY INTEREST**

### FINDINGS OF FACT

44. Applicants signed the application form, and the additional owner signed a copy of the application form with the deficiency response received by DNRC on August 11, 2022.

### **CONCLUSIONS OF LAW**

### HISTORIC USE AND ADVERSE EFFECT

45. Montana's change statute codifies the fundamental principles of the Prior Appropriation Doctrine. Sections 85-2-401 and -402(1)(a), MCA, authorize changes to existing water rights, permits, and water reservations subject to the fundamental tenet of Montana water law that one may change only that to which he or she has the right based upon beneficial use. A change to an existing water right may not expand the consumptive use of the underlying right or remove the well-established limit of the appropriator's right to water actually taken and beneficially used. An increase in consumptive use constitutes a new appropriation and is subject to the new water use permit requirements of the MWUA. McDonald v. State, 220 Mont. 519, 530, 722 P.2d 598, 605 (1986)(beneficial use constitutes the basis, measure, and limit of a water right); Featherman v.

Hennessy, 43 Mont. 310, 316-17, 115 P. 983, 986 (1911)(increased consumption associated with expanded use of underlying right amounted to new appropriation rather than change in use); Quigley v. McIntosh, 110 Mont. 495, 103 P.2d 1067, 1072-74 (1940)(appropriator may not expand a water right through the guise of a change – expanded use constitutes a new use with a new priority date junior to intervening water uses); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924)("quantity of water which may be claimed lawfully under a prior appropriation is limited to that quantity within the amount claimed which the appropriator has needed, and which within a reasonable time he has actually and economically applied to a beneficial use. . . . it may be said that the principle of beneficial use is the one of paramount importance . . . The appropriator does not own the water. He has a right of ownership in its use only"); Town of Manhattan, at ¶ 10 (an appropriator's right only attaches to the amount of water actually taken and beneficially applied); Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, Order Re Petition for Judicial Review, Pg. 9 (2011)(the rule that one may change only that to which it has a right is a fundamental tenet of Montana water law and imperative to MWUA change provisions); In the Matter of Application to Change a Water Right No. 41I 30002512 by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004).1

46. Sections 85-2-401(1) and -402(2)(a), MCA, codify the prior appropriation principles that Montana appropriators have a vested right to maintain surface and ground water conditions substantially as they existed at the time of their appropriation; subsequent appropriators may insist that prior appropriators confine their use to what was actually appropriated or necessary for their originally intended purpose of use; and, an appropriator may not change or alter its use in a manner that adversely affects another water user. Spokane Ranch & Water Co. v. Beatty, 37 Mont. 342, 96 P. 727, 731 (1908); Quigley, 110 Mont. at 505-11,103 P.2d at 1072-74; Matter of

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<sup>&</sup>lt;sup>1</sup> DNRC decisions are available at: http://www.dnrc.mt.gov/wrd/water\_rts/hearing\_info/hearing\_orders/hearingorders.asp

47. The cornerstone of evaluating potential adverse effect to other appropriators is the determination of the "historic use" of the water right being changed. Town of Manhattan, at ¶10 (recognizing that the Department's obligation to ensure that change will not adversely affect other water rights requires analysis of the actual historic amount, pattern, and means of water use). A change applicant must prove the extent and pattern of use for the underlying right proposed for change through evidence of the historic diverted amount, consumed amount, place of use, pattern of use, and return flow because a statement of claim, permit, or decree may not include the beneficial use information necessary to evaluate the amount of water available for change or potential for adverse effect.<sup>3</sup> A comparative analysis of the historic use of the water right to the proposed change in use is necessary to prove the change will not result in expansion of the original right, or adversely affect water users who are entitled to rely upon maintenance of conditions on the source of supply for their water rights. Quigley, 103 P.2d at 1072-75 (it is necessary to ascertain historic use of a decreed water right to determine whether a change in use expands the underlying right to the detriment of other water user because a decree only provides a limited description of the right); Royston, 249 Mont. at 431-32, 816 P.2d at 1059-60 (record could not sustain a conclusion of no adverse effect because the applicant failed to provide the Department with evidence of the historic diverted volume, consumption, and return flow); Hohenlohe, at ¶44-45; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, Order Re Petition for Judicial Review, Pgs. 11-12 (proof of historic use is required even when the right has been decreed because the decreed flow rate or volume establishes the maximum appropriation that may be diverted, and may exceed the

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<sup>&</sup>lt;sup>2</sup> <u>See also Holmstrom Land Co., Inc., v. Newlan Creek Water District</u>,185 Mont. 409, 605 P.2d 1060 (1979); <u>Lokowich v. Helena</u>, 46 Mont. 575, 129 P. 1063(1913); <u>Thompson v. Harvey</u>, 164 Mont. 133, 519 P.2d 963 (1974)(plaintiff could not change his diversion to a point upstream of the defendants because of the injury resulting to the defendants); <u>McIntosh v. Graveley</u>, 159 Mont. 72, 495 P.2d 186 (1972)(appropriator was entitled to move his point of diversion downstream, so long as he installed measuring devices to ensure that he took no more than would have been available at his original point of diversion); <u>Head v. Hale</u>, 38 Mont. 302, 100 P. 222 (1909)(successors of the appropriator of water appropriated for placer mining purposes cannot so change its use as to deprive lower appropriators of their rights, already acquired, in the use of it for irrigating purposes); and, <u>Gassert v. Noyes</u>, 18 Mont. 216, 44 P. 959(1896)(change in place of use was unlawful where reduced the amount of water in the source of supply available which was subject to plaintiff's subsequent right).

<sup>&</sup>lt;sup>3</sup>A claim only constitutes *prima facie* evidence for the purposes of the adjudication under § 85-2-221, MCA. The claim does not constitute *prima facie* evidence of historical use in a change proceeding under §85-2-402, MCA. For example, most water rights decreed for irrigation are not decreed with a volume and provide limited evidence of actual historic beneficial use. §85-2-234. MCA

historical pattern of use, amount diverted or amount consumed through actual use); <u>Matter of Application For Beneficial Water Use Permit By City of Bozeman</u>, *Memorandum*, Pgs. 8-22 (Adopted by DNRC *Final Order* January 9,1985)(evidence of historic use must be compared to the proposed change in use to give effect to the implied limitations read into every decreed right that an appropriator has no right to expand his appropriation or change his use to the detriment of juniors).<sup>4</sup>

48. An applicant must also analyze the extent to which a proposed change may alter historic return flows for purposes of establishing that the proposed change will not result in adverse effect. The requisite return flow analysis reflects the fundamental tenant of Montana water law that once water leaves the control of the original appropriator, the original appropriator has no right to its use and the water is subject to appropriation by others. E.g., Hohenlohe, at ¶44; Rock Creek Ditch & Flume Co. v. Miller, 93 Mont. 248, 17 P.2d 1074, 1077 (1933); Newton v. Weiler, 87 Mont. 164, 286 P. 133(1930); Popham v. Holloron, 84 Mont. 442, 275 P. 1099, 1102 (1929); Galiger v. McNulty, 80 Mont. 339, 260 P. 401 (1927); Head v. Hale, 38 Mont. 302, 100 P. 222 (1909); Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731; Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185; In the Matter of Application for Change Authorization No. G (W)028708-411 by Hedrich/Straugh/Ringer, DNRC Final Order (Dec. 13, 1991); In the

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<sup>&</sup>lt;sup>4</sup> Other western states likewise rely upon the doctrine of historic use as a critical component in evaluating changes in appropriation rights for expansion and adverse effect: Pueblo West Metropolitan District v. Southeastern Colorado Water Conservancy District, 717 P.2d 955, 959 (Colo. 1986)("[O]nce an appropriator exercises his or her privilege to change a water right ... the appropriator runs a real risk of requantification of the water right based on actual historical consumptive use. In such a change proceeding a junior water right ... which had been strictly administered throughout its existence would, in all probability, be reduced to a lesser quantity because of the relatively limited actual historic use of the right."); Santa Fe Trail Ranches Property Owners Ass'n v. Simpson, 990 P.2d 46, 55 -57 (Colo.,1999); Farmers Reservoir and Irr. Co. v. City of Golden, 44 P.3d 241, 245 (Colo. 2002)("We [Colorado Supreme Court] have stated time and again that the need for security and predictability in the prior appropriation system dictates that holders of vested water rights are entitled to the continuation of stream conditions as they existed at the time they first made their appropriation); Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002); Wyo. Stat. § 41-3-104 (When an owner of a water right wishes to change a water right ... he shall file a petition requesting permission to make such a change .... The change ... may be allowed provided that the quantity of water transferred ... shall not exceed the amount of water historically diverted under the existing use, nor increase the historic rate of diversion under the existing use, nor increase the historic amount consumptively used under the existing use, nor decrease the historic amount of return flow, nor in any manner injure other existing lawful appropriators.); Basin Elec. Power Co-op. v. State Bd. of Control, 578 P.2d 557, 564 - 566 (Wyo, 1978) (a water right holder may not effect a change of use transferring more water than he had historically consumptively used; regardless of the lack of injury to other appropriators, the amount of water historically diverted under the existing use, the historic rate of diversion under the existing use, the historic amount consumptively used under the existing use, and the historic amount of return flow must be considered.)

Matter of Application for Change Authorization No. G(W)008323-G76l By Starkel/Koester, DNRC Final Order (Apr. 1, 1992); In the Matter of Application to Change a Water Right No. 41I 30002512 by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004); Admin. R.M. 36.12.101(56)(Return flow - that part of a diverted flow which is not consumed by the appropriator and returns underground to its original source or another source of water - is not part of a water right and is subject to appropriation by subsequent water users).<sup>5</sup>

- Although the level of analysis may vary, analysis of the extent to which a proposed change may alter the amount, location, or timing return flows is critical in order to prove that the proposed change will not adversely affect other appropriators who rely on those return flows as part of the source of supply for their water rights. Royston, 249 Mont. at 431, 816 P.2d at 1059-60; Hohenlohe, at ¶¶ 45-6 and 55-6; Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731. Noted Montana Water Law scholar Al Stone explained that the water right holder who seeks to change a water right is unlikely to receive the full amount claimed or historically used at the original place of use due to reliance upon return flows by other water users. Montana Water Law, Albert W. Stone, Pgs. 112-17 (State Bar of Montana 1994).
- 50. In Royston, the Montana Supreme Court confirmed that an applicant is required to prove lack of adverse effect through comparison of the proposed change to the historic use, historic consumption, and historic return flows of the original right. 249 Mont. at 431, 816 P.2d at 1059-60. More recently, the Montana Supreme Court explained the relationship between the fundamental principles of historic beneficial use, return flow, and the rights of subsequent appropriators as they relate to the adverse effect analysis in a change proceeding in the following manner:

The question of adverse effect under §§ 85-2-402(2) and -408(3), MCA, implicates return flows. A change in the amount of return flow, or to the hydrogeologic pattern of return flow, has the potential to affect adversely downstream water rights. There consequently exists an inextricable link between the "amount historically consumed" and the water that re-enters the stream as return flow. . . . An appropriator historically has been entitled to the greatest quantity of water he can put to use. The requirement that the use be both beneficial and reasonable, however, proscribes this tenet. This limitation springs from a fundamental tenet of

<sup>&</sup>lt;sup>5</sup> The Montana Supreme Court recently recognized the fundamental nature of return flows to Montana's water sources in addressing whether the Mitchell Slough was a perennial flowing stream, given the large amount of irrigation return flow which feeds the stream. The Court acknowledged that the Mitchell's flows are fed by irrigation return flows available for appropriation. Bitterroot River Protective Ass'n, Inc. v. Bitterroot Conservation Dist. 2008 MT 377, ¶¶ 22, 31, 43, 346 Mont. 508, ¶¶ 22, 31,43, 198 P.3d 219, ¶¶ 22, 31,43(citing Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185).

western water law-that an appropriator has a right only to that amount of water historically put to beneficial use-developed in concert with the rationale that each subsequent appropriator "is entitled to have the water flow in the same manner as when he located," and the appropriator may insist that prior appropriators do not affect adversely his rights.

This fundamental rule of Montana water law has dictated the Department's determinations in numerous prior change proceedings. The Department claims that historic consumptive use, as quantified in part by return flow analysis, represents a key element of proving historic beneficial use.

We do not dispute this interrelationship between historic consumptive use, return flow, and the amount of water to which an appropriator is entitled as limited by his past beneficial use.

### <u>Hohenlohe</u>, at ¶¶ 42-45 (internal citations omitted).

- 51. The Department's rules reflect the above fundamental principles of Montana water law and are designed to itemize the type evidence and analysis required for an applicant to meet its burden of proof. Admin.R.M. 36.12.1901 through 1903. These rules forth specific evidence and analysis required to establish the parameters of historic use of the water right being changed. Admin.R.M. 36.12.1901 and 1902. The rules also outline the analysis required to establish a lack of adverse effect based upon a comparison of historic use of the water rights being changed to the proposed use under the changed conditions along with evaluation of the potential impacts of the change on other water users caused by changes in the amount, timing, or location of historic diversions and return flows. Admin.R.M. 36.12.1901 and 1903.
- 52. Applicant seeks to change existing water rights represented by its Water Right Claims. The "existing water rights" in this case are those as they existed prior to July 1, 1973, because with limited exception, no changes could have been made to those rights after that date without the Department's approval. Analysis of adverse effect in a change to an "existing water right" requires evaluation of what the water right looked like and how it was exercised prior to July 1, 1973. In McDonald v. State, the Montana Supreme Court explained:

The foregoing cases and many others serve to illustrate that what is preserved to owners of appropriated or decreed water rights by the provision of the 1972 Constitution is what the law has always contemplated in this state as the extent of a water right: such amount of water as, by pattern of use and means of use, the owners or their predecessors put to beneficial use. . . . the Water Use Act contemplates that all water rights, regardless of prior statements or claims as to amount, must nevertheless, to be recognized, pass the test of historical, unabandoned beneficial use. . . . To that extent only the 1972 constitutional recognition of water rights is effective and will be sustained.

220 Mont. at 529, 722 P.2d at 604; see also Matter of Clark Fork River Drainage Area, 254 Mont. 11, 17, 833 P.2d 1120 (1992).

- 53. Water Resources Surveys were authorized by the 1939 legislature. 1939 Mont. Laws Ch. 185, § 5. Since their completion, Water Resources Surveys have been invaluable evidence in water right disputes and have long been relied on by Montana courts. In re Adjudication of Existing Rights to Use of All Water in North End Subbasin of Bitterroot River Drainage Area in Ravalli and Missoula Counties, 295 Mont. 447, 453, 984 P.2d 151, 155 (1999)(Water Resources Survey used as evidence in adjudicating of water rights); Wareing v. Schreckendgust, 280 Mont. 196, 213, 930 P.2d 37, 47 (1996)(Water Resources Survey used as evidence in a prescriptive ditch easement case); Olsen v. McQueary, 212 Mont. 173, 180, 687 P.2d 712, 716 (1984) (judicial notice taken of Water Resources Survey in water right dispute concerning branches of a creek).
- 54. While evidence may be provided that a particular parcel was irrigated, the actual amount of water historically diverted and consumed is critical. <u>E.g.</u>, *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, DNRC Proposal for Decision adopted by Final Order (2005). The Department cannot assume that a parcel received the full duty of water or that it received sufficient water to constitute full service irrigation for optimum plant growth. Even when it seems clear that no other rights could be affected solely by a particular change in the location of diversion, it is essential that the change also not enlarge an existing right. <u>See MacDonald</u>, 220 Mont. at 529, 722 P.2d at 604; <u>Featherman</u>, 43 Mont. at 316-17, 115 P. at 986; <u>Trail's End Ranch</u>, <u>L.L.C.</u> v. Colorado Div. of Water Resources 91 P.3d 1058, 1063 (Colo., 2004).
- 55. The Department has adopted a rule providing for the calculation of historic consumptive use where the applicant proves by a preponderance of the evidence that the acreage was historically irrigated. Admin. R. M. 36.12.1902 (16). In the alternative an applicant may present its own evidence of historic beneficial use. In this case applicant has not elected to proceed under Admin. R.M. 36.12.1902. (FOF No. 25-27).
- 56. Based upon the Applicant's evidence of historic use, the applicant has proven by a preponderance of the evidence the historic use of Water Right Claim No. 40A 110250-00 of 154.42 AC-FT diverted volume and 0.62 CFS flow rate with a consumptive use of 7.53 acre-feet. Based upon the applicant's evidence of historic use, the applicant has proven by a preponderance of the evidence the historic use of Water Right Claim No. 40A 30107008 of 439.51 AC-FT diverted

volume and 1.75 CFS flow rate (subject to the shared flow rate agreement) with a consumptive use of 21.43 acre-feet. (FOF No. 6, 27)

57. Based upon the applicant's comparative analysis of historic water use and return flows to water use and return flows under the proposed change, the applicant has proven that the proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued. §85-2-402(2)(b), MCA. (FOF Nos. 36, 37)

### **BENEFICIAL USE**

58. A change applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. §§85-2-102(4) and -402(2)(c), MCA. Beneficial use is and has always been the hallmark of a valid Montana water right: "[T]he amount actually needed for beneficial use within the appropriation will be the basis, measure, and the limit of all water rights in Montana . . . " McDonald, 220 Mont. at 532, 722 P.2d at 606. The analysis of the beneficial use criterion is the same for change authorizations under §85-2-402, MCA, and new beneficial permits under §85-2-311, MCA. Admin.R.M. 36.12.1801. The amount of water that may be authorized for change is limited to the amount of water necessary to sustain the beneficial use. E.g., Bitterroot River Protective Association v. Siebel, Order on Petition for Judicial Review, Cause No. BDV-2002-519, Montana First Judicial District Court (2003) (affirmed on other grounds, 2005 MT 60, 326 Mont. 241, 108 P.3d 518); Worden v. Alexander, 108 Mont. 208, 90 P.2d 160 (1939); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924); Sitz Ranch v. DNRC, DV-10-13390, Montana Fifth Judicial District Court, Order Affirming DNRC Decision, Pg. 3 (2011)(citing BRPA v. Siebel, 2005 MT 60, and rejecting applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet); Toohey v. Campbell, 24 Mont. 13, 60 P. 396 (1900)("The policy of the law is to prevent a person from acquiring exclusive control of a stream, or any part thereof, not for present and actual beneficial use, but for mere future speculative profit or advantage, without regard to existing or contemplated beneficial uses. He is restricted in the amount that he can appropriate to the quantity needed for such beneficial purposes."); §85-2-

312(1)(a), MCA (DNRC is statutorily prohibited from issuing a permit for more water than can be beneficially used).

- 59. In the Matter of Application for Beneficial Water Use Permit No. 76LJ-115-831 by Benjamin and Laura Weidling, (DNRC Final Order 2003), aff'd on other grounds, In the Matter of Application for Beneficial Water Use Permit No. 76LJ-115-83100 by Benjamin and Laura Weidling and No. 76LJ-1158300 by Ramona S. and William N. Nessly, Order on Motion for Petition for Judicial Review, Cause No. BDV-2003-100, Montana First Judicial District (fish and wildlife use denied for lack of proof)(2004).
- 60. The Department may issue a change authorization for less than the amount of water requested, but may not issue a change authorization for more water than is requested or more water than can be beneficially used without waste for the purpose stated in the application. §85-2-312, MCA; see also, McDonald v. State, 220 Mont. 519, 722 P.2d 598 (1986); Toohey v. Campbell, 24 Mont. 13, 60 P. 396 (1900).
- 61. The Department can also consider waste in a change proceeding. Hohenlohe at ¶ 71. Waste is defined to include the "application of water to anything but a beneficial use." §85-2-102(23), MCA. An absence of evidence of waste does not prove the amount requested is for a beneficial use. <u>E.g.</u>, *Stellick*, <u>supra</u>.
- 62. <u>Matter of Application for Permit No. 76LJ-24668 by Hammell</u> (DNRC Proposal for Decision 1981)(Applicant requested enough water to irrigate 22 acres. Permit was reduced because applicant only provided evidence that 5 acres would actually be irrigated.)
- 63. <u>Matter of Application for Permit No. 41I-28224 by Loomis/Edenfield</u> (DNRC Proposal for Decision 1982)(Applicant requested permit for 900 gpm up to 49.5 ac/ft/yr. Evidence only demonstrated an actual need for 600 gpm and 33 ac/ft/yr. Belief that 900 gpm/49.5 ac/ft/yr would be needed to satisfy increased production at some point in the future "not in accord with the fixed and definite plan for the use of water that is the hallmark of an initiation of an appropriation." Accordingly, permit only granted for 600 gpm and 33 ac/ft/yr.).
- 64. Applicant proposes to use water for irrigation which is a recognized beneficial use. §85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence irrigation is a beneficial use and that 44.50 acre-feet of diverted volume and 417 GPM flow rate of water requested is the amount needed to sustain the beneficial use [add if applicable: "and is within the standards set by DNRC Rule/other standard"]. §85-2-402(2)(c), MCA (FOF Nos. 6, 29, 10)

### ADEQUATE MEANS OF DIVERSION

- 65. Pursuant to §85-2-402 (2)(b), MCA, the Applicant must prove by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate. This codifies the prior appropriation principle that the means of diversion must be reasonably effective for the contemplated use and may not result in a waste of the resource. Crowley v. 6<sup>th</sup> Judicial District Court, 108 Mont. 89, 88 P.2d 23 (1939); In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC (DNRC Final Order 2002)(information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies based upon project complexity; design by licensed engineer adequate).
- 66. In the Matter for Application to Change a Water Right No. 101960-41S by Royston (DNRC Final Order 1989) (means of diversion and conveyance found to be inadequate where the irrigation system was designed for flow rates of 750 gpm, the maximum usage allowed during non-high water periods was 144-247 gpm, and the evidence failed to demonstrate that the system could be operated at the lower flow rates) (affirmed, Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston, 249 Mont. 425, 816 P.2d 1054(1991))
- 67. Pursuant to §85-2-402 (2)(b), MCA, applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. The Applicant has utilized the NRCS for assistance in irrigation system design, and the flow rate of 417 gpm is required for the number of nozzles involved in the system. (FOF No. 10)

#### POSSESSORY INTEREST

68. Pursuant to §85-2-402(2)(d), MCA, the Applicant must prove by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. See also Admin.R.M. 36.12.1802

69. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. (FOF No. 44)

#### PRELIMINARY DETERMINATION

Subject to the terms and analysis in this Preliminary Determination Order, the Department preliminarily determines that this Application to Change Water Right Nos. 40A 110250-00 and 40A 30107008 should be granted subject to the following.

Applicant is proposing to change the point of diversion for Statements of Claim nos. 40A 110250-00 and 40A 30107008. They propose to move from a headgate supplying water through the Lavina North Canal in the NENWSW Section 5 T6N R22E to a pumpsite in the Musselshell River located in the NWSENW Section 11 T6N R22E. The applicant proposes to supply wheel line irrigation with the new pump site. Applicant also proposes to change the place of use associated with Statement of Claim 40A 30107008 to 21.81 acres in the NW of Section 11, T6N R22E. and use its flow rate to serve the 21.81 acres in the place of use associated with claim 40A 110250-00. Under the change authorization, water right 40A 30107008 will have 417 GPM coded on it, and water right 40A 110250-00 will have 278 GPM coded on it. Each water right will have an information remark coded on it explaining that in combination, the flow rate will not exceed 417 GPM under the change authorization.

Specific changes to each right restated as follows:

Applicant is proposing to change the point of diversion for Statement of Claim no. 40A 110250-00. They propose to move from a headgate supplying water through the Lavina North Canal in the NENWSW Section 5 T6N R22E to a pumpsite in the Musselshell River located in the NWSENW Section 11 T6N R22E. The applicant proposes to supply wheel line irrigation with the new pump site. This water right will have an information remark coded on it explaining that in combination, the flow rate will not exceed 417 GPM under the change authorization.

Applicant is proposing to change the point of diversion for Statements of Claim no. 40A 30107008. They propose to move from a headgate supplying water through the Lavina North Canal in the NENWSW Section 5 T6N R22E to a pumpsite in the Musselshell River located in the NWSENW

Section 11 T6N R22E. The applicant proposes to supply wheel line irrigation with the new pump site. Applicant also proposes to change the place of use associated with Statement of Claim 40A 30107008 to 21.81 acres in the NW of Section 11, T6N R22E. This water right will have an information remark coded on it explaining that in combination, the flow rate will not exceed 417 GPM under the change authorization. This authorization as granted will be subject to the following measurement condition:

The Appropriator shall install a measuring device in the conveyance facility as near as practical to the pump site, in order to measure appropriations. The type and location of the device must be approved by the Department. The Appropriator shall keep a written record of the flow rate and volume of water diverted, including the period of time of diversion. Records must account separately for any appropriations under this authorization from appropriations under any other water right using the same diversion works and conveyance facility. Records shall be submitted by December 31 of each year and upon request at other times during the year. Failure to submit reports as required by these conditions may be cause for revocation of the change. The records must be sent to the Lewistown Water Resources Regional Office. The Appropriator shall maintain the measuring/monitoring device so it always operates properly and measures flow rate accurately during periods of appropriation.

### **NOTICE**

This Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to §85-2-307, MCA. The Department will set a deadline for objections to this Application pursuant to §85-2-307, and -308, MCA. If this Application receives a valid objection, it will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and §85-2-309, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the Department will grant this Application as herein approved. If this Application receives a valid objection(s) and the valid objection(s) are conditionally withdrawn, the Department will consider the proposed condition(s) and grant the Application with such conditions as the Department decides necessary to satisfy the applicable criteria. E.g., §§85-2-310, -312, MCA.

DATED this 17th of March 2023.

/Original signed by Steven B. Hamilton/ Steven B. Hamilton, Manager Lewistown Regional Office Department of Natural Resources and Conservation

## **CERTIFICATE OF SERVICE**

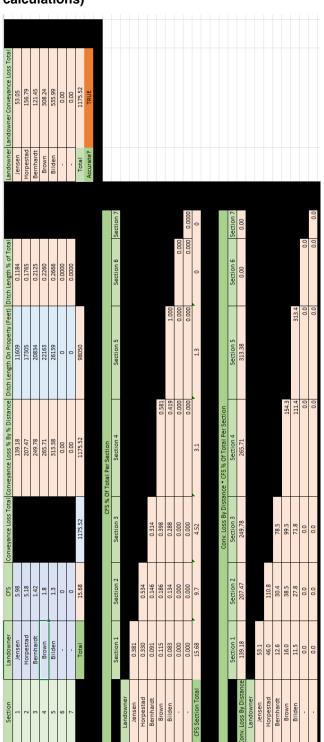
This certifies that a true and correct copy of the PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this 17<sup>th</sup> day of March 2023, by first class United States mail.

HEATHER & BART BILDEN PO BOX 193 LAVINA, MT 59046

DATED this 17th of March 2023.

Matt Schmidt, Water Resources Specialist II Lewistown Regional Office Department of Natural Resources and Conservation

Appendix A: Calculations for Applicant Portion of Conveyance Losses (multi-user ditch loss calculations)



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	HCV AF (Including IL)	28.96				multi-user	ns						PCV AF (Including IL)	23.28
	Historic Irrecoverable Losses (IL) Flood 5%:	2.90				See separate worksheet for multi-user	ditch loss calculations						Proposed Irrecoverable Losses (IL) Flood 5%	2.33
	Field Application AF	57.92				See separate	ditch						Field Application AF	46.56
Bilden	On-farm Efficiency (Percent)	45%				Seepage Loss (/43560)	920.27	Vegetation Loss (*2)					On-farm Efficiency (Percent)	45%
606 SW 40A 30154581 Bilden	HCV AF (minus IL)	26.07		Total HDV AF	1222.94	Days Irrigated	213	ditch length (miles)	4.95	Ditch Evaporation (/43560)	7.27		PCV AF (minus IL)	20 02
909	Historic Acres	28.39		Seasonal Conveyance Loss Volume (seepage loss + vegetation loss + ditch evaporation)	1175.55	Ditch Loss Rate (ft3/ft2/day)	09'0	Davs Irrigated	213	Evaporation (Potts)	2.02		Proposed New Acres	21.81
	Golden Valley County 1964-1973 Management Factor (Percent)	62.6%		On-farm Efficiency	25%	Ditch Length (Feet)	26139	Historic Flow Rate (HFR) (CFS) =	15.68	Ditch Length (Feet)	26139.00		Golden Valley County 1964-1973 Management Factor (Percent)	82'29
	Golden Valley Co / Golden Vall Ryegate Weather Station 1964-1973 Flood/Sprinkler ET Managemen (Inches)	17.6		HCV AF (minus IL)	26.07	Ditch Wetted Perimeter (Feet)	12	% loss/mile	0.0075	Ditch Width (Feet)	00.9		Golden Valley Co / Ryegate Weather Station : Flood/Sprinkler ET (Inches)	17.60
	ptive (HCV) Flood			Diverted HDV)		) :sso7		ion Loss:		aporation:			ed pptive G PCV) R R Rood F Poor R	acres